Subject: Bi-Directional Amplifier (BDA) Installation and Use

Date Issued or Revised: April 10, 2007
Date Review: April 1, 2008

4.1.11 Bi-Directional Amplifier (BDA) Installation and Use

I. Subject and Purpose

It is the MPSCS policy to review and certify the design and implementation of any bi-directional amplifier (BDA) used to retransmit MPSCS licensed frequencies. As an FCC licensee, the MPSCS is subject to Federal regulation. Specifically, and for purposes of this policy, MPSCS and its members are responsible to comply with regulation 47CFR90.219 "Use of Signal Boosters," and ensure that all applicable rule requirements are met as spelled out in the MPSCS Member Subscriber Agreement.

Since the amplification and retransmission of radio frequencies can potentially cause harmful interference to the MPSCS, it is it is our policy to track the use, design, installation, and performance of BDAs. This may involve site surveys, installation inspections and testing.

II. Procedures and Guidelines

BDAs are radio frequency devices used to enhance radio coverage inside buildings or in areas where geographic or other features limit radio system coverage.

BDAs come in two basic types. A broadband BDA passes a broad segment of spectrum indiscriminately and are to be used only in confined or indoor areas such as buildings, tunnels, and underground areas, etc. or in remote areas where there is little or no risk of interference to other users.

A channelized or narrowband BDA uses filters to limit the signals passed to certain specific frequencies. Channelized BDAs can be used outdoors if properly engineered.

Agencies experiencing specific localized coverage problems may request an engineering evaluation. MPSCS staff will investigate and provide recommendations which may include installation of a BDA. Local agencies will fund the installation of such solutions to enhance coverage. MPSCS staff reserves the right to a final inspection of a BDA installation.

For purposes of local BDA coverage enhancement, the following steps are required.

1. Submit description of proposed design configuration and the necessary coverage enhancement requirements.

2. The attached form shall be used to record all pertinent technical data on the BDA and then copies be kept on file at MPSCS engineering offices and the NCC.

3. MPSCS engineering shall review all technical data prior to activation of the BDA and may inspect and verify that the BDA continues to operate within its design parameters.

III. Responsible Party
Engineer Manager, NCC Manager
A. Contact for Questions
Engineer
B. Phone, Fax and Email Addresses
517.333.5020; 517.336-6222; Eichenberga@michigan.gov

IV. Applicable Forms
Bi-Directional Amplifier Data Sheet

VI. Termination or Review Responsibility
MPSCS Director

VII. Linkages to Other Relevant Data

Bi-Directional Amplifier Data Sheet

Date_____ Filled out by: _____

Describe the specific area requiring coverage enhancement (e.g., outdoor parking lot, indoor shopping mall, hospital emergency room, jail, etc…):

BDA Make and model number:
Serial number:
BDA RF Power output (watts):
BDA Frequency Band:
BDA location (installed at):

Donor antenna type (antenna pointed to MPSCS tower):
Mounting location:
Orientation:
Antenna line, Type and Length:
Donor Site (which MPSCS tower is supplying the signal):

Transmit antenna type (antenna supplying enhanced coverage):
Quantity of in-building antennas:
Mounting location(s):
Antenna line, Type and Length:
Orientation (omni, or directional 0-360 degrees):

BDA Electrical Power Source:			
UPS Backup:	Yes	No	
Other backup:	Generator	Battery	None

User agency contact:

_____

Maintenance Contact:

_____

Additional Information:

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